# 10 Resid PCT/PTO 03 JAN 2005

### PATENT COOPERATION TREATY

## **PCT**

REC'D 17 NOV 2004

### **INTERNATIONAL PRELIMINARY EXAMINATION REPORT**

(PCT Article 36 and Rule 70)

Ann	licant's	or an	ant's file reference							
Applicant's or agent's file reference P 02 080 WO FOR FURTHER A					CTION		n of Transmittal of International amination Report (Form PCT/IPEA/416)			
International application No. International filing date PCT/DK 02/00462 02.07.2002				International filing date 02.07.2002	(day/mont	h/year)	Priority date (day/month/year) 02.07.2002			
International Patent Classification (IPC) or both national classification and IPC A23G3/30										
Applicant GUMLINK A/S										
1.	This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.									
2.	This	REP	ORT consists of a total of	of 4 sheets, including t	his cover	sheet.				
	This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).									
	These annexes consist of a total of 10 sheets.									
3.	This report contains indications relating to the following items:									
	ı	$\boxtimes$	Basis of the opinion							
	H		Priority							
	Ш		Non-establishment of o	opinion with regard to r	ovelty, in	ventive step ar	nd industrial applicability			
	IV		Lack of unity of inventi-							
	٧	×	Reasoned statement u citations and explanation	inder Rule 66.2(a)(ii) w ons supporting such st	ith regard atement	to novelty, inv	rentive step or industrial applicability;			
	VI		Certain documents cite	• • •						
	VII		Certain defects in the in	nternational application	1					
	VIII		Certain observations of	n the international app	lication					
Date of submission of the demand					Date of c	ompletion of this	s report			
26.01.2004						2004				
Name and mailing address of the International preliminary examining authority:						d Officer	Activa Palacian.			
European Patent Office D-80298 Munich Tel. +49 89 2399 - 0 Tx: 523656 epmu d Fax: +49 89 2399 - 4465					Vernier Telephor	, F le No. +49 89 23	399-8646			



## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/DK 02/00462

1.	Basis of the report	

 With regard to the elements of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)):

	De	Description, Pages								
	1-3	36	as originally filed							
	Cla	aims, Numbers								
	1-3	•	received on 01.10.2004 with letter of 29.09.2004							
			received on 01.10.2004 with letter of 29,09.2004							
	Dra	rawings, Sheets								
1/1			as originally filed							
2.	<ol><li>With regard to the language, all the elements marked above were available or furnished to this Ar language in which the international application was filed, unless otherwise indicated under this iter</li></ol>									
	The	ese elements were available or furnished to this Authority in the following language: , which is:								
		the language of a tr	anslation furnished for the purposes of the international search (under Rule 23.1(b)).							
		the language of publication of the international application (under Rule 48.3(b)).								
		the language of a tr Rule 55.2 and/or 55	anslation furnished for the purposes of international preliminary examination (under .3).							
3.	Witl inte	h regard to any <b>nucl</b> o rnational preliminary	eotide and/or amino acid sequence disclosed in the international application, the examination was carried out on the basis of the sequence listing:							
		contained in the international application in written form.								
		☐ filed together with the international application in computer readable form.								
		furnished subsequently to this Authority in written form.								
		furnished subseque	ntly to this Authority in computer readable form.							
The statement the in the internation			the subsequently furnished written sequence listing does not go beyond the disclosure application as filed has been furnished.							
		The statement that t listing has been furn	he information recorded in computer readable form is identical to the written sequence ished.							
. The amendments have resulted in the cancellation of:										
		the description,	pages:							
		the claims,	Nos.:							
		the drawings,	sheets:							

Form PCT/IPEA/409 (January 2004)



International application No.

PCT/DK 02/00462

This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

- 6. Additional observations, if necessary:
- V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- 1. Statement

Novelty (N)

Yes: Claims

1-31

Inventive step (IS)

Yes: Claims 1-31 Claims

Claims

Industrial applicability (IA)

Yes: Claims

No:

1-31

No: Claims

2. Citations and explanations

see separate sheet



# INTERNATIONAL PRELIMINARY International application No. PCT/DK 02/00462 EXAMINATION REPORT - SEPARATE SHEET

#### Item V

#### 1. The following documents are considered:

D1: EP-A-0 151 344 (WARNER LAMBERT CO)

D2: US-A-5 017 385 (WIENECKE HORST P)

D3: US-A-4 737 366 (GERGELY GERHARD ET AL)

D4: DE 28 08 160 A (NORDSTROEM RABBE)

D5: EP-A-0 221 850 (WARNER LAMBERT CO)

D6: US-A-4 000 321 (MOCHIZUKI KEIZO ET AL)

#### 2. Article 33(2) PCT

None of the cited documents discloses a chewing gum comprising a chewing gum centre made of gum base granules which comprise flavour or an active ingredient and conventional gum base granules, in addition to chewing gum additives such as sweeteners or flavours. Thus, the subject-matter of present claims 1-31 is novel.

#### 3. Article 33(3) PCT

In view of the technical problem to be solved (to provide a flavoured chewing gum) and its unexpected solution (use of gum base granules which comprise flavour or an active ingredient and conventional gum base granules, in addition to chewing gum additives such as sweeteners or flavours), the subject-matter of claims 1-31 can be regarded as involving an inventive step over the closest prior art D1 (only one type of gum base granules).

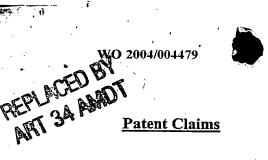
#### 4. Article 33(4) PCT

The subject-matter of present claims 1-31 meets the requirements of Article 33(4) PCT, since it is applicable in the food industry.

#### 5. Further comments

- a. Article 6 PCT: the word "about" in present claims and in the description is unclear (Article 6 PCT and PCT Guidelines III-4.5).
- b. Contrary to the requirements of Rule 5.1(a)(ii) PCT, the documents D1-D3 have not been identified in the description and the relevant background art disclosed therein has not been briefly discussed.

Form PCT/Separate Sheet/409 (Sheet 1) (EPO-April 1997)

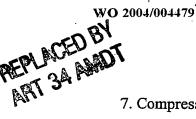


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### Patent Claims

- 1. Compressed chewing gum tablet (37) comprising a chewing gum center (38),
- 5 said gum center (38) comprising a compression of gum base granules (32) and chewing gum additives (33),
  - said chewing gum additives comprising sweeteners and flavors.
- at least a first part of said gum base granules (32) comprising flavor or active 10 ingredients incorporated gum base,
  - at least a second part of said gum base granules (32) comprising granules of conventional gum base.
  - 2. Compressed chewing gum tablet according to claim 1, wherein said at least a first part of said gum base granules (32) comprising flavor resistant resin.
- 20 3. Compressed chewing gum tablet according to claim 1 or 2, wherein said at least a first part of said gum base granules (32) comprising synthetic resin.
  - 4. Compressed chewing gum tablet according to any of claims 1 to 3, wherein said synthetic resin comprising polyvinyl acetate, vinyl acetate-vinyl laurate copolymers and mixtures thereof.
  - 5. Compressed chewing gum tablet according to any of claims 1 to 4, wherein said at least a first part of said gum base granules (32) being substantially wax-free.
- 30 6. Compressed chewing gum tablet according to any of claims 1 to 5, wherein said chewing gum tablet having a water content of less than 5% by weight, preferably of less than 3% by weight, even more preferably less than 1% by weight.

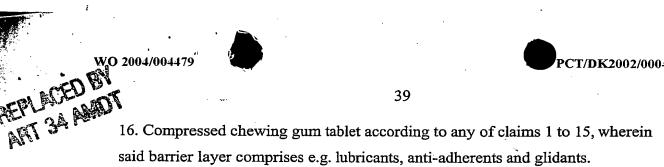


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- 7. Compressed chewing gum tablet according to any of claims 1 to 6, wherein said gum center (38) being substantially free of compression aid compounds.
- 8. Compressed chewing gum tablet according to any of claims 1 to 7, wherein said at least a second part of said gum base granules (32) being tackiness moderated.
  - 9. Compressed chewing gum tablet according to any of claims 1 to 8, wherein said at least a second part of said gum base granules (32) comprising natural resins.
  - 10. Compressed chewing gum tablet according to any of claims 1 to 9, wherein said at least a second part of said gum base granules (32) comprising wax.
- 11. Compressed chewing gum tablet according to any of claims 1 to 10, wherein
  said moderated tackiness being obtained by means of at least one natural resin incorporated in at least a part of the gum base granules (32)
  - 12. Compressed chewing gum tablet according to any of claims 1 to 11, wherein the compressed chewing gum tablet comprises about 3 % to 50 % by weight of natural resins, preferably about 5% to 40% by weight.
  - 13. Compressed chewing gum tablet according to any of claims 1 to 12, wherein the compressed chewing gum tablet comprises about 0.5% to 30% by weight of elastomers, preferably about 5% to 25% by weight.
  - 14. Compressed chewing gum tablet according to any of claims 1 to 13, wherein the compressed chewing gum tablet comprises about 0.1 % to 15 % by weight of flavoring agents, preferably about 0.8 % to 5 % by weight.
- 30 15. Compressed chewing gum tablet according to any of claims 1 to 14, wherein the natural resins provides an improved and sticky texture of the tablet.



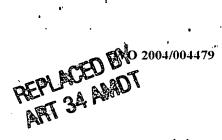


- 17. Compressed chewing gum tablet according to any of claims 1 to 16, wherein 5 the barrier layer comprises magnesium stearate.
  - 18. Compressed chewing gum tablet according to any of claims 1 to 17, wherein said barrier layer comprises metallic stearates, hydrogenated vegetable oils, partially hydrogenated vegetable oils, polyethylene glycols, polyoxyethylene monostearates, animal fats, silicates, silicates dioxide, talc, magnesium stearates, calcium stearates, fumed silica, powdered hydrogenated cottonseed oils, hydrogenated vegetable oils, hydrogenated soya oil and mixtures thereof.
- 19. Compressed chewing gum tablet according to any of claims 1 to 18, wherein 15 the gum center is substantially free of lubricants, anti-adherents and glidants.
  - 20. Compressed chewing gum according to any of the claims 1 to 19, wherein said chewing gum additives comprises sweeteners in the amount of from about 5 to about 95% by weight of the chewing gum, more typically about 20 to about 80% by weight such as 30 to 60% by weight of the gum.
    - 21. Chewing gum granulate,

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- -at least a part of the chewing gum granulate particles being incorporated with flavor and/or active ingredients and comprising gum base made on the basis of synthetic resins and
- -at least a part of the chewing gum granulate particles comprising gum base made on the basis of natural resins.
- 22. Chewing gum granulate according to claim 21, wherein at least a part of the 30 chewing gum granulate comprises bulk sweeteners, preferably sorbitol.
  - 23. Method of providing a compressed chewing gum comprising the steps of



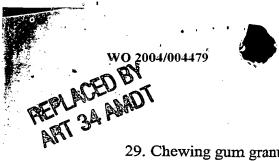
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- mixing at least one elastomer and at least one plasticizer into a first homogenous gum base,
- incorporating an amount flavor into said first gum base, preferably by mechanically mixing,
  - granulating said flavor incorporated gum base,
  - mixing at least one elastomer and at least one plasticizer into a second homogenous gum base,
  - granulating said second gum base,
- 10 blending said first and said second gum base during addition of further chewing gum additives and
  - compressing the mixture into a tablet.
- 24. Method according to claim 23, whereby the granulation is performed during addition of at least one bulk sweetener.
  - 25. Chewing gum granulate wherein
  - a first part of the chewing gum granulate comprising granules being incorporated with flavor and/or active ingredients
  - a second part of the chewing gum granulate comprising granules on conventional gum base.
  - 26. Chewing gum granulate according to claim 25, wherein
- 25 the first part of the chewing gum granulate comprises synthetic resins.
  - 27. Chewing gum granulate according to claim 25 or 26, wherein the second part of the chewing gum granules comprises gum base made on the basis of natural resins.
  - 28. Chewing gum granulate according to any of the claims 25 to 27, wherein the first part of the chewing gum granulate is substantially free of natural resins.





- 29. Chewing gum granulate according to any of the claims 25 to 28, wherein the first part of the chewing gum granulate is substantially free of wax.
- 5 30. Chewing gum granulate according to any of the claims 25 to 29, wherein the chewing gum granulate comprises grinding aid, preferably bulk sweeteners.
  - 31. Chewing gum granulate according to the claim 30, wherein said grinding aid comprises sorbitol.

32. Chewing gum granulate according to any of the claims 25 to 31, wherein said synthetic resin comprising polyvinyl acetate, vinyl acetate-vinyl laurate copolymers and mixtures thereof.

33. Chewing gum granulate according to any of the claims 25 to 32, wherein the granulate is substantially free of lubricants, anti-adherents and glidants.